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BURNS DOANE SWECKER & MATHIS  
P. O. BOX 1404  
ALEXANDRIA, VA 22313-1404

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 30

Application Number: 08/988,537

Filing Date: 12/10/1997

Appellant(s): Kenji Ishibashi et al.

**MAILED**

JAN 28 2002

Technology Center 2600

Charles F. Wieland III  
For Appellant

**EXAMINER'S ANSWER**

This is in response to appellant's brief on appeal filed November 13, 2001.

**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

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**(3)     *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4)     *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5)     *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6)     *Issues***

The appellant's statement of the issues in the brief is correct.

**(7)     *Grouping of claims.***

Appellant's brief includes a statement that claims 1-4, 23 and 25 stand or fall together and claims 24 and 26 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

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**(8) *ClaimsAppealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,579,026 Tabata 11-1996

5,844,530 Tosaki 12-1998

6,124,843 Kodama 9-2000

Takasu Tomoji (Japanese Patent publication NO. 03056923A);

published 12/03/1991.

**(10) *New Prior Art***

No new prior art has been applied in this Examiner's Answer.

**(11) *New ground of rejection.***

This Examiner's Answer does not contain any new ground of rejection.

**(12) *Grounds of rejection.***

The following ground(s) of rejection are applicable to the appealed claims.

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***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1 and 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (US patent NO 5,579,026) in view of Tosaki (US patent NO. 5,844,530).

As to claim 1, Tabata (figures 1-2) teaches an image observation apparatus (head mounted display ) including a main body (1) which has an image display device (7R and 7L); an operational member (controller (11)) which is operated manually in order to give instruction to the image observation device; a detector for detecting a posture of the main body; and a controller (part of the controller (11)) for controlling an image which is displayed on the image display device in response to a signal which is output from the detector; see abstract, column 3, lines 50-63 and column 5, lines 19-55.

Tabata does not teach an embodiment wherein the controller part is provided on the main body. Tabata does not teach that the controller stops controlling the image which is displayed on the image display device when the operational member is operated.

Tosaki teaches a head mounted display for displaying prescribed images; see abstract. Tosaki (figure 14) teaches that in case the user needs to stop the game, a pause switch is depressed on the control pad (201) and temporarily stop the game (i.e., not allowing changing the

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image which is displayed on the image display device). If the game is temporarily stopped, the pause button on the control pad (201) should be depressed again to cancel the pause mode; see column 16, lines 22-39.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tabata's device to include the teaching of Tosaki of having a switch that stops (freezes) the changing of the image on the display so as motivated by Tabata, to enable the user to temporarily stops the game if needed and return back to it from where he or she left it.

Note that the combination of Tabata and Tosaki fairly teaches the claimed limitations because claim 1 discloses that the controller does not allow changing the image which is displayed on the image display device in response to the signal which is output from the detector when the operational member is operated. As discussed above Tabata teaches having a detector that detects the posture of the device. The operational member may any operation that can be performed on the device. Considering that, the operational member reads on Tosaki's pause switch, because once, the pause switch is operated, no changing in the image is allowed.

As to the claimed limitation that the operational member is provided on the main body, as can be seen from Applicant's figure 1, the device not a head mounted display. Both Tabata and Tosaki devices are head mounted. Thus, the obvious position of the operational switches to be in the user's hand. However, if either Tabata or Tosaki device is to be surface mounted display, the obvious design to the switches to be provided on the main body so that to add to the portability of

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the device. Furthermore, to allow easily operation of the device. Furthermore, Tosaki (figure 14) shows the user operating the device using a device held in the user's hand.

As to claim 23, the claim is substantially similar to claim 1. Furthermore, as can be seen in figure 14, Tosaki shows the device comprising a portion held by the user while the user is observes the images being displayed.

As to claim 25, the claim is substantially similar to claim 1, furthermore, as can be seen in figure 14, Tosaki shows a portion of the device that is handheld and that includes a pause switch (201) which provides an instruction to the image observation to prevent circuitry which provides the image display device with context from changing the displayed image. For that, Tosaki teaches that the pause switch is depressed on the control pad (201) and temporarily stop the game (i.e., not allowing changing the image which is displayed on the image display device). If the game is temporarily stopped, the pause button on the control pad (201) should be depressed again to cancel the pause mode; see column 16, lines 22-39.

15. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata and Tosaki as applied to claim 1 above, and further in view of Takasu Tomoji (Japanese patent Publication NO. 03056923A; hereinafter referred to as Takasu) (provided by the Applicant in the information disclosure statement).

Note the discussion of Tabata and Tosaki above. Tabata and Tosaki do not expressly teach a camera which forms the image which displayed on the image display device (image

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forming device) (claim 4) and wherein the controller controls the image which is displayed thereon by controlling the posture of the camera.

Takasu (figure 1) teaches a head mounted display device wherein the a camera which forms the image which displayed on the image display device (image forming device) (claim 4) and wherein the controller controls the image which is displayed thereon by controlling the posture of the camera; see abstract.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Takasu's teaching of having a camera to form the displayed images and wherein the controller controls the image by controlling the posture of the camera to Tabata's modified device so as motivated by Takasu, to avoid manually controlling the viewing direction.

16. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tosaki and Tabata as applied to claims 23 and 25 above, and further in view of Kodama (US Patent No. 6,124,843).

As seen above, Tabata and Tosaki teach all the limitations of claims 24 and 26 except the citation that the observation device includes an image forming device (Camera) which forms the image which is displayed on the image displayed device by controlling the posture of the camera.

However, Kodama (figure 10) teaches a head mounting type image display system main body has a fixed photographing camera 32 for photographing a scene in front of the operator (observer) 1. The photographing range of the photographing camera 32 roughly matches the

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observation field angle of the external field of the operator (observer) 1. The photographing range of the photographing camera 32 is preferably appropriately changed by, e.g., zooming upon movement of an optical system (not shown) in the photographing camera 32 since the field angle can be adjusted; see column 21, lines 5-13.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Kodama of having a camera to be incorporated to Tabata's modified device so as motivated by Kodama, the observer can observe an image photographed in front of him.

#### **(17) Response to Argument**

Appellants (bottom of page 6) disagree with the Examiner's assessment that the visor switch 92 and the pause switch of the control pad 201 is analogous to the stop button and the pause button of a VCR (this suggestion was introduced in the final Office Action to respond to Applicant's argument). It is respectfully submitted that the Examiner did not use this analogy to be part of the rejection. It is rather an attempt from the Examiner to relate the pause switch of the control pad 201 to a known device that is familiar to anyone. However, since a VCR was not claimed, this argument is moot.

Appellants (first and second paragraphs of page 7) argued that the Tosaki patent states unambiguously that the movement of the visor "opens the switch 92 of the fluorescent tube 71." This means that the images are simply no longer projected because they are no longer lit, and the

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images are actually being generated. Appellants argued that the pause switch is necessary because the game would continue without the user's observation if the game were not paused. Examiner respectfully disagrees. Appellants only discussed the scenario of having the movement of the visor opens the switch of the fluorescent tube and then using the pause switch because the user's observation if the game were not paused. Appellants did not discuss another scenario in which the user depresses the pause switch without moving the visor. This situation may occur if the user need to temporarily stop the game without having the visor 80 being removed to relax his hand or to stretch and immediately continue the game after depressing the pause switch to continue the game.

Appellants (third paragraph of page 7) argued that Tosaki patent cannot meet the recitation of claim 1 of a controller not allowing the changing of an image which is displayed on the image display device since no image is displayed once the visor is moved in an up position. Examiner respectfully disagrees. Appellants again assuming the scenario of having the visor moved in an up position. Examiner respectfully submits that there is nothing in Tosaki patent that limits the use of the pause switch on the condition of having the visor moved in an up position. If the visor is not moved (FIG. 3), and the user depresses the pause switch, the obvious expectation is having the image displayed on the visor 80 being stopped (paused) by the pause switch. In addition, Tosaki (column 18, lines 33-35) specifically states "Another option is to connect the HMD 1 pertaining to the present embodiment with a holding device that puts the game in pause mode when the visor 80 has been opened." This citation clearly teaches that the movement of the

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visor (located on the main body) will both turn off the fluorescent tube and put the game in pause mode (stop the game). Therefore, Examiner strongly believes that in this case, Tosaki patent fairly teach the recitation of claim 1 of the controller not allowing the changing of an image which is displayed on the image display.

Furthermore, the broad **negative limitation** recited in the last 3 lines of claim 1 recites “wherein the controller does not allow changing the image which is displayed on the image display device....”. This limitation simply tells us what the apparatus does not do instead of what it does. Therefore, in Tosaki patent, if the pause switch stops the game (column 16, lines 30-32), the images must stop. Further, if the game is paused, there would be no need to have the image change in response to the detector.

Appellants (paragraph 4 of page 7) argued that “it would not be obvious for the pause switch to be operable at a time other than when the visor has caused the fluorescent tube switch 92 to turn off the fluorescent tube by the movement of the visor to actually cause the images to pause, rather than the game as the Tosaki patent states.” Examiner respectfully disagrees. There is no proof in Tosaki patent that contemplate that the pause switch is only operable when the visor has caused the fluorescent to turn off. User may need to pause the game without moving the visor.

Appellants (bottom of page 7) argued that the previous Office Action suggested that the game pause switch of the Tosaki patent is like a video pause switch on a VCR. It is respectfully submitted that the Examiner did not use this analogy to be part of the rejection. It is rather an

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attempt from the Examiner to relate the pause switch of the control pad 201 to a known device that is familiar to anyone. However, since a VCR was not claimed, this argument is moot.

Appellants (top of page 8) argued that "There is no reason to think that stopping the interactive process would freeze the image being displayed." Examiner respectfully disagrees. If a game that includes images is stopped (using the pause switch); images must stop, no matter whether the visor is moved or not. As to Appellants argument (page 8, lines 3-5) that freezing the image would be inappropriate particularly for head mounted display since freezing the image would have a disorienting effect on the user. First, the disorientation effect is not claimed. Second, after pausing the image, user may simply remove the visor or take the helmet off to eliminate the disorientation effect.

Appellants (page 8, lines 5-14) argued that the alleged invention finds its origin a problem of display devices wherein when a user sets the display device down, he expects it to be oriented at the same location when it is picked up. Examiner respectfully submits that the issue of orientation is not claimed.

Appellants (top of page 9) argued that Kodama does not disclose anything analogous to a controller which controls the image which is displayed by controlling the posture of the camera as recited in claim 24, or by operating the image data which are output from the image forming device, as recited in claim 26. Examiner respectfully disagrees. As indicated in the rejection of claim 1 above, Tabata teaches an image observation apparatus includes an operational member (controller (11)) which is operated manually in order to give instruction to the image observation

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device; a detector for detecting a posture of the main body; and a controller (part of the controller (11)) for controlling an image which is displayed on the image display device in response to a signal which is output from the detector; see abstract, column 3, lines 50-63 and column 5, lines 19-55. Therefore, Kodama is merely cited to teach the citation of having a camera for claim 24 and an image forming device in claim 26. Appellants (page 9, lines 7-10) argued that “the invention recited in claim 24 and 26 means that the image on the image display is not merely paused, but that the circuitry (e.g., camera and gimbal movement circuit) is prevented from changing the image.” It is respectfully submitted by the Examiner that such a limitation is not claimed in either claim 24 nor 26.

In Summary, the main argument that Appellants presented in this brief is asserting that, the limitation disclosed in claim 1 which recites, “the controller does not allow changing the image ...” is not taught by Tosaki. Examiner strongly believes that the pause switch taught by Tosaki on column 16, lines 30-32, which specifically states “it is possible at this time to depress the pause switch on the control pad 201 and to temporarily stop the game.”, and on column 18, lines 33-35 which specifically states “Another option is to connect the HMD 1 pertaining to the present embodiment with a holding device that puts the game in pause mode when the visor 80 has been opened.” fairly teach the disputed limitation as claimed.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

Amr. Awad.  
January 25, 2002

Burns, Doane, Swecker & Mathis, L.L.P.  
P.O. Box 1404  
Alexandria, Virginia 22313-1404

CONFEEZEE - RAH  
RICH HSERPE  
SPE, ART UNIT 2674